Mission

Provide fundamental enabling technologies for enhanced ship integrity and performance. Conduct full spectrum research, development, testing, life-cycle management, and in-service engineering in the areas of:

**SURVIVABILITY & WEAPONS EFFECTS**
- Navy Unique Requirements

**STRUCTURES & COMPOSITES**
- Architecture of the Ship System

**MATERIALS & MANUFACTURING**
- Foundation for All Capabilities

**ENVIRONMENTAL & ENERGY**
- Green and Safe Operations
Vision & Technical Capabilities

Vision
We will be the Navy's premier provider in survivability, structures, materials and environmental knowledge enabling the fleet and its warfighters to perform all missions safely and effectively.

Technical Capabilities

CD 14: Surface, Undersea and Weapon Vehicle Materials and Manufacturing Technologies
CD 15: Surface & Undersea Vehicle Structures
CD 16: Alternative Energy and Power Sources R&D
CD 17: Liquid Waste Management, Science and Systems
CD 20: Surface, Undersea and USMC Vehicle Vulnerability Reduction and Protection
CD 25: Radiation Detection Technology Research and Management
Materials & Manufacturing Div (Code 61)

- **Welding, Processing & NDE**
  - Acquisition, RDT&E, S&T, and ISE support
  - Focus on welding, surface engineering, NDE, hull husbandry automation, and computational materials engineering
  - Experts in solid state manufacturing, robotics/automation, welding consumable design and development, and ICME

- **Additive Manufacturing Project Office**
  - Naval Center of Knowledge in R&D and S&T
  - Accelerating implementation of AM including Navy specific standard and specification development
  - Fleet reach-back, application and training support
  - Coordinating SYSCOM and DoN efforts

- **Integrated Manufacturing Office**
  - Navy lead for Marine Corps Mobile Manufacturing
  - Management and oversight of CPSD and RIP
  - Composite materials for Maintainability and Affordability

- **Physical Metallurgy and Fire**
  - Acquisition, RDT&E, S&T, and ISE services for naval alloys
  - Metallurgical analyses and characterization
  - Material failure analyses
  - Magnetostrictive materials
  - Evaluating the fire performance

- **Corrosion & Coatings Engineering**
  - Acquisition, RDT&E, S&T, and ISE support for naval and expeditionary environments
  - Preventative and corrective maintenance strategy planning, recommendations, evaluations, and training
  - Experts in biofouling and antifouling agents

- **Non-Metallic Mat’ls Research & Eng.**
  - RDT&E, S&T, acquisition, and ISE services
  - Experts in high temperature ceramic applic.
  - Experts in polymer processing applic.
  - Fabricator of acoustic absorbing/reflecting tiles
Environmental & Energy Div (Code 63)

• Radiation Technology and Systems Safety
  – Certified Principal for Safety services for Navy ship acquisition programs
  – Environmental and radiation OSH technologies and processes
  – Radiation technical standards development
  – RDT&E, calibration, and fielding of radiation instruments and sensors

• Wastewater Management
  – Experts on domestic and international environmental policies, leaders of the DoD Uniform National Discharge Standards (UNDS) Program
  – RDT&E of oily, ballast, grey, and black wastewater treatment technologies and processes
  – Engineering support for shipboard treatment systems, shore facilities, and installations
  – Advise acquisition programs on system selection

• Solid Waste and Hazardous Material Management
  – RDT&E of solid waste systems and equipment for surface and submarine fleet integration
  – Development of procedures and processes for hazardous material management in the fleet
  – ISE services for subsurface fleet
  – Advanced non-skid and hull surface cleaning technologies
  – Engineering support for shore facilities and installations

• Advanced Power and Energy
  – RDT&E, S&T, and acquisition support to NAVSEA programs and USMC
  – Experts on energy storage (batteries), certification, and safety
  – Engineering support of portable and hybrid power systems and fuel cells for forward deployed expeditionary sites
Structures & Composites Div (Code 65)

- **Ship Structures**
  - RDT&E, S&T, acquisition, and ISE services
  - Validate contractor designs to standards via FEA
  - Develop design methodologies for surface ships and composite structures

- **Submarine Structures & Propulsors**
  - RDT&E, S&T, acquisition, and ISE services
  - Validate contractor designs to standards
  - Develop design methodologies and software tools for pressure hulls, composite structures and propulsors

- **Performance and Evaluation**
  - RDT&E, S&T, acquisition, and ISE services
  - Large-scale structural laboratory testing
  - Full and model scale trials to validate design loads
  - 3D measurement capabilities

- **Criteria and Assessment**
  - RDT&E, S&T, acquisition, and ISE services
  - Develop criteria to assess naval structures
  - Develop and maintain Navy structural analysis tools
  - Develop monitoring systems for loads and damage detection (SHM)

- **Structural Composites**
  - RDT&E, S&T, acquisition, and ISE services for composite materials
  - Develop and evaluate composite and lightweight design and evaluations
  - Composite patch repair of cracked alloys

- **Structural Engineering Support Services**
  - ISE Services
  - Degraded structure evaluations for in-service vessels
  - Aviation flight deck certifications
Survivability & Weapons Effect Div (Code 66)

• Underwater Explosions R&D
  – R&D and acquisition support services
  – Improving methods and procedures for shock hardening
  – Provide advanced M&S services to predict damaging effects of UNDEX on surface and submarine hulls

• Dynamic Measurements & Testing
  – RDT&E and acquisition support services
  – Measure dynamic pressure loads of ship and submarine structures
  – Preparing for the LCS-5 and-6 Full Ship Shock trials
  – Validate analytical predictions

• Hull Response & Protection
  – RDT&E, S&T, and acquisition services
  – M&S of ship, sub, and USMC vehicle responses from weapons effects
  – Develop structure, armor, and mitigation techniques to improve survivability

• Vulnerability Assessment
  – Experts in Live Fire Test & Evaluation and Total Ship Survivability Trials
  – M&S to assess primary and secondary damage and recoverability actions

• Survivability and Weapon Effects M&S
  – R&D and eventual acquisition services
  – Developing new M&S technologies for advanced weapon effect simulations
Major Facilities

- Materials & Manufacturing Technology
  - Additive Manufacturing R&D Lab
  - Manufacturing Knowledge and Education (MAKE) Lab
  - Materials Characterization Facility
  - Fatigue and Fracture
  - Nondestructive Evaluation Lab
  - Ceramics Processing Lab
  - Polymers Processing Lab
  - Fusion/Solid State Joining and Allied Processes Lab
  - Robotic Welding Lab
  - Physical Simulation Labs
  - Computational Materials Science Lab
  - Coatings Applications and Analysis Site
  - Fire Protection Materials Facility
  - Composites Materials Lab
Major Facilities

- **Environmental & Energy**
  - Abusive Battery Lab
  - High Voltage Test Facility
  - Radiation Range
  - Liquid Waste Lab
  - Solid Waste, Medical Waste and Pollution Prevention Lab
  - Thermal Destruction Facility

- **Structural Mechanics Facility**
  - Deep Submergence Pressure Test Facility
  - Large Scale Structural Evaluation Facility
  - Fatigue and grillage Test Facility

- **Vulnerability & Protection Complex**
  - Explosives Test Pond & Dynamics Measurements Complex
  - Large Scale Underwater Explosions Test Complex (APG)
  - Protection Analysis Center
Overview of Active Contracts

Small Business Contracts 61% of Portfolio

- Small SEAPORT 37%
- Small Service 24%
- Small Supply 1%
- Large SEAPORT 16%
- Large Service 4%
- Large Supply 18%

<table>
<thead>
<tr>
<th>Type</th>
<th># of Contracts</th>
<th>% of Total</th>
<th>Total Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEAPORT</td>
<td>4</td>
<td>53%</td>
<td>$163.5M</td>
</tr>
<tr>
<td>Service</td>
<td>6</td>
<td>28%</td>
<td>$87.8M</td>
</tr>
<tr>
<td>Supply</td>
<td>7</td>
<td>19%</td>
<td>$60.1M</td>
</tr>
</tbody>
</table>

Small Business Contracts 61% of Portfolio

Distribution Statement A: Approved for Public Release; distribution unlimited.
Current Contracts

### Materials & Manufacturing Division (C/61)

<table>
<thead>
<tr>
<th>Contract Title</th>
<th>Total Value</th>
<th>Service/ Supply</th>
<th>Contractor</th>
<th>Concludes (Qtr/FY)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electrochemical Power Sources and Composite Material Engineering Services</td>
<td>$20.5M</td>
<td>SEAPORT</td>
<td>Spectrum Technology Group</td>
<td>Q3/FY21</td>
</tr>
<tr>
<td>U.S. Marine Corp Corrosion and Materials Engineering Services</td>
<td>$49.2M</td>
<td>SEAPORT</td>
<td>Vision Point Systems</td>
<td>Q3/FY21</td>
</tr>
<tr>
<td>U.S. Navy Corrosion Control Assistance Team (CCAT)</td>
<td>$43.9M</td>
<td>SEAPORT</td>
<td>Excet Inc.</td>
<td>Q2/FY21</td>
</tr>
<tr>
<td>NGD9 castable urethane polymer</td>
<td>$2.8M</td>
<td>Supply</td>
<td>Goodrich Corp.</td>
<td>Q3/FY20</td>
</tr>
<tr>
<td>Rubber Compound (NXAS126)</td>
<td>$0.51M</td>
<td>Supply</td>
<td>Burke Industries Inc.</td>
<td>Q4/FY19</td>
</tr>
</tbody>
</table>

### Environmental and Energy Division (C/63)

<table>
<thead>
<tr>
<th>Contract Title</th>
<th>Total Value</th>
<th>Service/ Supply</th>
<th>Contractor</th>
<th>Concludes (Qtr/FY)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Battlefield Doimeter (MBD-2)</td>
<td>$11.7M</td>
<td>Supply</td>
<td>RSCS, Inc.</td>
<td>Q4/FY21</td>
</tr>
<tr>
<td>Full Spectrum Environmental Quality Systems</td>
<td>$49.8M</td>
<td>SEAPORT</td>
<td>BMT Designers and Planners</td>
<td>Q1/FY21</td>
</tr>
<tr>
<td>Thermoluminescent Dosimeter (TLD) Equipment</td>
<td>$19.9M</td>
<td>Supply</td>
<td>Thermo Eberline Inc.</td>
<td>Q2/FY20</td>
</tr>
<tr>
<td>B800 Reader Maintenance</td>
<td>$2.6M</td>
<td>Service</td>
<td>Thermo Eberline Inc.</td>
<td>Q3/FY19</td>
</tr>
<tr>
<td>Air Particle Sampler</td>
<td>$1.6M</td>
<td>Supply</td>
<td>Spectral Labs</td>
<td>Q3/FY19</td>
</tr>
<tr>
<td>Electronic Personal Dosimeter (EPD)</td>
<td>$4.6M</td>
<td>Supply</td>
<td>Thermo Eberline Inc.</td>
<td>Q3/FY19</td>
</tr>
<tr>
<td>Air Particle Detector (APD) – Ships</td>
<td>$20.0M</td>
<td>Supply</td>
<td>SAIC/Leidos</td>
<td>Q4/FY18</td>
</tr>
</tbody>
</table>

### Structures and Composites Division (C/65)

<table>
<thead>
<tr>
<th>Contract Title</th>
<th>Total Value</th>
<th>Service/ Supply</th>
<th>Contractor</th>
<th>Concludes (Qtr/FY)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Composite Systems for Marine Components (SBIR Phase III)</td>
<td>$49.9M</td>
<td>Service</td>
<td>Seemann Composites Inc.</td>
<td>Q3/2020</td>
</tr>
<tr>
<td>Non Destructive Testing and Evaluation (SBIR Phase III)</td>
<td>$24.5M</td>
<td>Service</td>
<td>Materials Sciences Corp</td>
<td>Q3/FY20</td>
</tr>
</tbody>
</table>

### Survivability and Weapons Effect Division (C/66)

<table>
<thead>
<tr>
<th>Contract Title</th>
<th>Total Value</th>
<th>Service/ Supply</th>
<th>Contractor</th>
<th>Concludes (Qtr/FY)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engineering Services for Advanced Survivability Program (ASAP)</td>
<td>$4.0M</td>
<td>Service</td>
<td>SURVICE Engineering, Inc.</td>
<td>Q3/FY23</td>
</tr>
<tr>
<td>Engineering Services for Software Development and Shock Assessments</td>
<td>$5.9M</td>
<td>Service</td>
<td>Thorton Tomasetti Inc.</td>
<td>Q4/FY21</td>
</tr>
<tr>
<td>Data Recording Equipment and Calibration/Repair</td>
<td>$3.6M</td>
<td>Service</td>
<td>Pacific Instruments Inc.</td>
<td>Q2/FY20</td>
</tr>
</tbody>
</table>
## Long Range Acquisition Forecast

<table>
<thead>
<tr>
<th>Division</th>
<th>Requirements Title</th>
<th>Incumbent</th>
<th>Anticipated Total Value</th>
<th>Anticipated Acq Strategy</th>
<th>Anticipated Solicitation Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>61</td>
<td>U.S. Marine Corp Corrosion and Materials Engineering Services</td>
<td>Vision Point Systems</td>
<td>$50M</td>
<td>SEAPORT</td>
<td>Q4/FY18</td>
</tr>
<tr>
<td>61</td>
<td>U.S. Marine Corp Corrosion and Materials Technician Services</td>
<td>Vision Point Systems</td>
<td>$50M</td>
<td>SEAPORT</td>
<td>Q4/FY18</td>
</tr>
<tr>
<td>63</td>
<td>Radiation Air Particle Detector (APD) Ships</td>
<td>Leidos</td>
<td>$15M</td>
<td>Competitive</td>
<td>Q4/FY18</td>
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</tbody>
</table>